Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-15: (canceled)

16. (currently amended) An integrated IP network, wherein:

said integrated IP network includes a plurality of IP networks and a plurality of network node devices, said network node devices including address management tables comprising a plurality of records,

a first network node device being connected to a first IP network via a first internal line and being connected to a second IP network via a second internal line , and

a second network node device being connected to said first IP network via a third internal line and being connected to said second IP network via a fourth internal line, first and second records being set at an address management table in said first network node device,

the first record comprising a network identifier that designates the first IP network and the second record comprising a network identifier that designates the second IP network

a first terminal being connected to said first network node device by a first network node terminal via a first communication line, and a second terminal being connected to said second network node device by a second network node terminal via a second communication line; wherein:

when an external IP packet sent from said first terminal is input to said first network node device from said first network node terminal, said first network node device compares an IP address and a port number included in said external IP packet with an IP address and a port number included in said first record, and:

if the IP address and port number included in said external IP packet and the IP address and port number included in said first record coincide respectively, said first network node device IP-capsulates said external IP packet and then forms an internal IP packet ~~is formed based on a sending side network node terminal and an IP packet, a receiving side network node terminal is decided based on a network node terminal discriminating information of said internal packet, and at least one of an IP voice/image network, an IP data network, an IP telephone network, a best effort network is included~~, said first network node device sending said internal IP packet to said first internal line, and said internal IP packet being transferred in said first IP network and said third internal line and then reaching said second network node device, in compliance with the network identifier in said first record,

if said IP addresses and said port numbers do not coincide, said first network node device compares the IP address and the port number included in said external IP packet with an IP address and a port number included in said second record, and

if the IP address and port number included in said external IP packet and the IP address and port number included in said second record coincide respectively, said first network node device IP-capsulates said external IP packet and then forms an internal IP packet, said first network node device sending said internal IP packet to said second internal line, and said internal IP packet being transferred in said second IP network and said fourth internal line and then reaching said second network node device, in compliance with the network identifier in said second record, or

if said IP addresses and said port numbers do not coincide, said external IP packet is discarded;

said external IP packet being restored from said internal IP packet at said second network node device, and said external IP packet being sent to said second terminal via said second communication line.

17-22. (canceled)

23. (new). The integrated IP network according to claim 16, wherein said comparison on said addresses and said port numbers is carried out on addresses only.

24. (new) The integrated IP network according to claim 16, wherein said first IP network is an IP telephone network or said second IP network is an IP data network.

25. (new) The integrated IP network according to claim 16, wherein said first IP network is an IP multicast network or said second IP network is a best-effort network.

26. (new) The integrated IP network of claim 16, further comprising at least one domain name server in one of said IP networks;

wherein the domain name server establishes a one-to-one correspondence between host names assigned to external terminals of the network and the IP addresses of said external terminals;

wherein the first address management table comprises a third record comprising an address of the domain name server; and

wherein when said first terminal sends an initial external IP packet including a host name of a destination terminal and having a destination address of a domain name

server to the first network node device, the first network node device compares the IP address of the first terminal and the destination address of the domain name server in said external IP packet with an IP address and the address of the domain name server in the third record; and if the IP address of the first terminal and the destination address of the domain name server in said external IP packet coincide with the IP address and the address of the domain name server in the third record; the first network node device converts said initial external IP packet into an internal IP packet directed at the domain name server in the third record and then sends the internal IP packet to said domain name server, said domain name server forming an internal IP packet including the destination terminal IP address having a one-to-one correspondence with said host name in said internal IP packet and then sends back said internal IP packet to the first network node device;

the first network node device returning an external IP packet comprising the destination terminal IP address to the first terminal, thus allowing the first terminal to send to the first network node device an external IP packet including an IP address, wherein said IP address is the destination terminal IP address.

27. (new) An integrated IP network, wherein:

said integrated IP network includes a plurality of IP networks and a plurality of network node devices, said network node devices including address management tables comprising a plurality of records,

a first network node device being connected to a first IP network via a first internal line and being connected to a second IP network via a second internal line , and

a second network node device being connected to said first IP network via a third internal line and being connected to said second IP network via a fourth internal

line, first and second records being set at an address management table in said first network node device,

the first record comprising a network identifier that designates the first IP network and the second record comprising a network identifier that designates the second IP network

a first terminal being connected to said first network node device by a first network node terminal via a first communication line, and a second terminal being connected to said second network node device by a second network node terminal via a second communication line; wherein:

when an external IP packet sent from said first terminal is input to said first network node device from said first network node terminal, said first network node device compares a port number included in said external IP packet with a port number included in said first record, and:

if the port number included in said external IP packet and the port number included in said first record coincide respectively, said first network node device IP-capsulates said external IP packet and then forms an internal IP packet, said first network node device sending said internal IP packet to said first internal line, and said internal IP packet being transferred in said first IP network and said third internal line and then reaching said second network node device, in compliance with the network identifier in said first record,

if said said port numbers do not coincide, said first network node device compares the port number included in said external IP packet with a port number included in said second record, and

if the port number included in said external IP packet and the port number included in said second record coincide respectively, said first network node device IP-capsulates said external IP packet and then forms an internal IP packet, said first

network node device sending said internal IP packet to said second internal line, and said internal IP packet being transferred in said second IP network and said fourth internal line and then reaching said second network node device, in compliance with the network identifier in said second record, or

if said port numbers do not coincide, said external IP packet is discarded;

said external IP packet being restored from said internal IP packet at said second network node device, and said external IP packet being sent to said second terminal via said second communication line.

28. (new) The integrated IP network according to claim 27, wherein said first IP network is an IP telephone network, or said second IP network is an IP data network, an IP multicast network or a best-effort network.

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